

(Model.)

2 Sheets—Sheet 2.

G. W. TALLMAN.
Locking Latch.

No. 238,729.

Patented March 8, 1881.

Fig. 3.

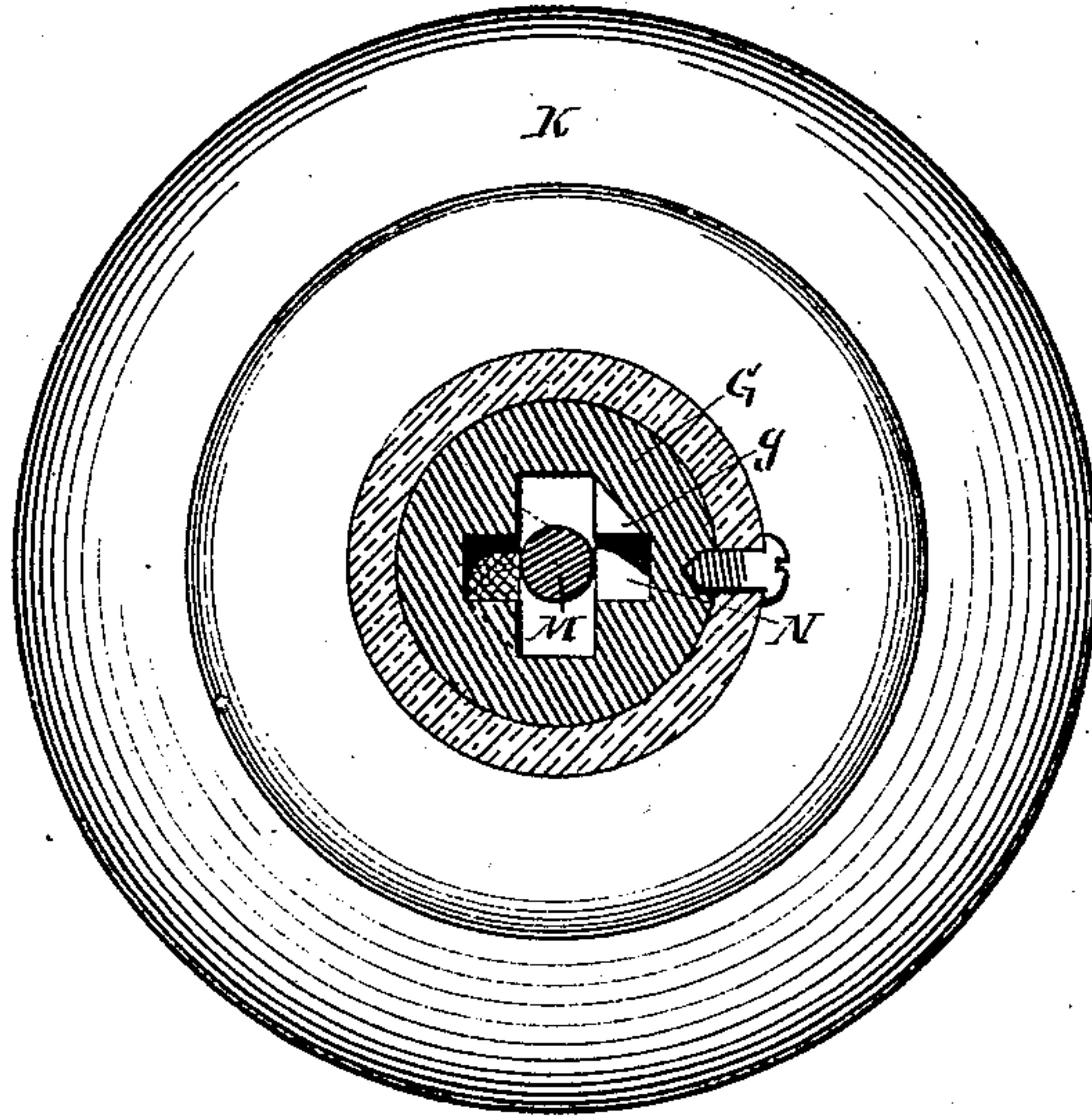
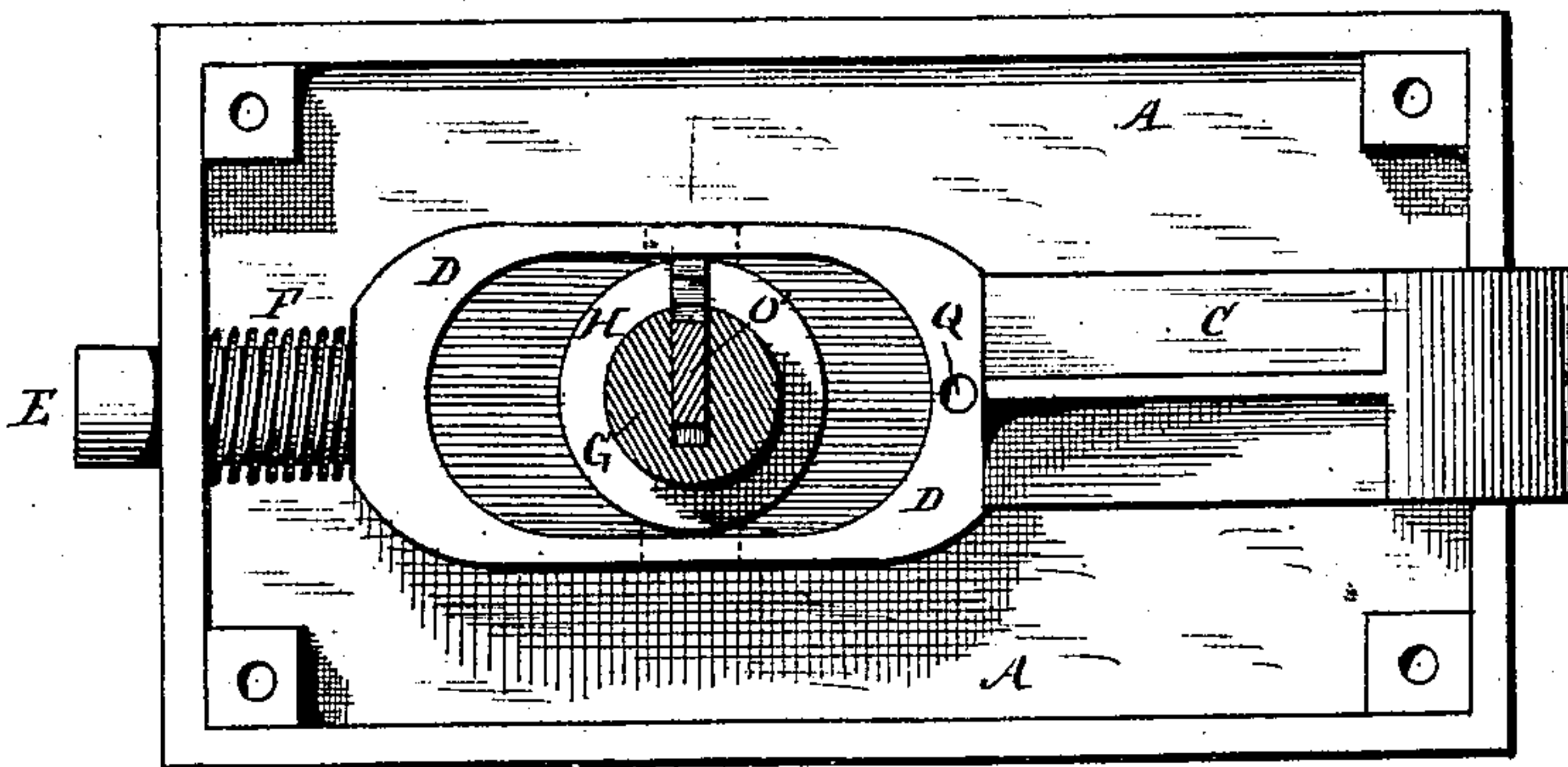


Fig. 4.



Witnesses:
Allen Long,
H. B. Grafton

George W. Tallman, Inventor,
By Baine, Grafton & Sord,
Attys.

UNITED STATES PATENT OFFICE.

GEORGE W. TALLMAN, OF NEW YORK, N. Y.

LOCKING-LATCH.

SPECIFICATION forming part of Letters Patent No. 238,729, dated March 8, 1881.

Application filed October 28, 1880. (Model.)

To all whom it may concern:

Be it known that I, GEORGE W. TALLMAN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Locks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

The present invention relates to that class of knob-latches or latch-locks which are provided with means for connecting the knob-spindle with the bolt for the purpose of enabling the latter to be operated from the outside and inside of the door in the manner of an ordinary knob-latch, the mechanism being constructed so that said spindle can be disconnected from the bolt for the purpose of preventing the latter from being operated from the outside of the door unless the spindle is first connected with the bolt by means of a key inserted into the outside knob, the connection of the bolt with the spindle from the inside being effected by a device extending through the inside knob.

The invention consists in a novel construction and combination of parts, which will be hereinafter more fully described, and then set forth in the claims.

In the drawings, Figure 1 is a vertical section through center of knob-spindle. Fig. 2 is a horizontal section of the lock, taken through the center of the knob-spindle. Fig. 3 is an enlarged cross-section through the knob-spindle on the line *y y*, the relative position of the spindle being that shown by Fig. 1. Fig. 4 is a side elevation of the lock, taken on the line *x x* of Fig. 1, the side of the case being removed.

The lock or bolt case A, of a rectangular or other shape, is provided with a detachable face-plate, B, and with an end opening, *a*, through which the bolt C is projected into its receiving mortise or strike on the door-frame.

The bolt C is constructed with a yoke, D, having a guide-stem, E, extending through the

rear end of the casing A. This stem is encircled by a spiral spring, F, which serves to project the bolt from the lock or latch casing.

The knob-spindle G is constructed with a central enlarged portion or hub, H, which fits into the yoke D, the opening in the latter being of such a size and shape as to receive said hub and permit the proper rotation of the latter. The spindle G extends through suitable rosettes or plates I, attached to the outer faces of the casing, and has knobs J K applied to its ends for the purpose of operating the same. The spindle is made hollow, or has axial openings formed therein, which extend from the outer ends of said spindle to the hub or enlarged central portion, H. These openings are made of an angular shape, and are designed for the reception of a push-rod, L, on the inside of the door, and a key, M, inserted through the outside knob. The outer end of the spindle has a cap-plate, N, the opening in which is arranged at right angles to the bore of the spindle, but is in line with the opening in the outside knob. The key M and push-rod L are both formed with a nose or beveled end, *m*, and the key M has a series of nibs, *n*, which, when the key is first inserted into the knob-spindle, fit into wards *g*, arranged at the sides of the aperture or bore in said spindle. The object of the interior wards of the knob-spindle and the cap-plate on the outer end of said spindle is to prevent the insertion of any tool or implement into the knob-spindle except the proper key having nibs registering with or passing between the wards of the spindle. It will be perceived that the key, after having been passed through the outer knob and cap-plate of the spindle, is turned so as to engage with or pass between the wards of said spindle. The key can then be pushed forward, so that its nose will engage with the devices forming the connection with the latch-bolt. The hub portion H is constructed with a square or angular vertical recess or socket, which receives a sliding block or tumbler.

The block O is acted upon by the key or push-rod inserted through the proper knob, and is provided with extensions or noses O', which fit into the aperture of the spindle, so much of said bore as receives the extensions or noses O' being made open or slotted at the top,

so as to enable the upper sides of said noses to be projected or raised flush with the surface of the spindle. The extensions or noses O' are beveled on their under sides, so as to permit the beveled end of the key M or push-rod L to engage therewith and raise the block O . This block, when projected above the surface of the hub portion H by means of the key M or push-rod L , is caused to engage with square openings or sockets P , made in the yoke D . When the parts are in this position the spindle is turned by means of either knob, causing the block O to move the bolt or rather the yoke, and when the bolt is fully retracted into the bolt-casing the block O will fill the opening in the yoke. When the key or push-rod is disengaged from the nose of the block O the latter is withdrawn into the hub and disconnected from the yoke of the bolt by means of a spiral or other spring, R , located within said block. The sides of the latter are slotted, as shown at o^4 , so as to move on a transverse guide-pin, o^5 , arranged inside the hub H . The block has a central opening extending from the top down past the side slots o^4 nearly to the bottom of the block, and the spring R is placed at the bottom of this central opening beneath the guide-pin o^5 , against which it presses. The push-pin L has a button, u , at its outer end, and a long angular shank, u^2 , which slides in the correspondingly-shaped bore of the spindle. The shank u^2 has the beveled inner end or nose, m , before referred to.

It will readily be perceived that when the block or tumbler is disengaged from the yoke of the bolt the spindle will, when rotated, play loosely in the yoke and not operate the same.

For the purpose of preventing the bolt from being moved from the outside of the door by means of the key, I provide a simple locking device consisting of a pin, W , having a milled head, X , and a screw-threaded outer portion, which moves in a threaded guide socket or tube, Y , on the inside face-plate of the lock-

casing. This pin, when projected into the lock-casing, enters a seat, Q , in the front end of the yoke D , and thus serves to lock the bolt.

I am aware that a latch-bolt has been made which is projected into the door-casing by a spring, and retracted therefrom by means of push-stems provided with triangular or beveled plates, which engage with a friction-roller of the latch-bolt.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a knob-latch or latch-lock, the combination of a hollow knob-spindle having a central socketed hub and a block or tumbler sliding therein, and the yoke of the bolt encompassing said hub and provided with apertures, with an outside knob adapted for the reception of a suitable key, and an inside knob provided with a push-pin, substantially as and for the purpose set forth.

2. In a knob-latch, the knob-spindle having an angular bore containing lateral wards and a cap-plate provided with an opening arranged transversely to the opening in the spindle, and a mortised hub or central portion containing a sliding block or tumbler, in combination with an apertured knob, a suitably-nibbed key, and a latch-bolt, adapted for engagement with the block in the spindle, substantially as and for the purpose set forth.

3. In a knob-latch, the combination of a knob-spindle having a central socket, a spring-retracted block or tumbler fitted in said socket, and having beveled extensions, and a latch or locking bolt adapted to engage with the block or tumbler, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE W. TALLMAN.

Witnesses:

FREDERICK G. SUTTON,
JOS. H. SEVERANCE.